

Family Chironemidae

Villiform or conical teeth in the jaws and on vomer. Premaxillaries with posterior expansions vestigial or absent. Maxillary with a strong posterior expansion just below its palatine articulation. No subocular shelf. Occipital crest very short, developed only on the posterior surface of the skull; no parietal crests. Vertebrae 33, of which 20 caudal; precaudals with parapophyses from fourth to fifth; 1 or 2 ribs sessile. Dorsal with 14 or 15 spines and 16 to 18 rays. Anal with 3 ^{spines} rays and 6 or 7 rays. Genera two.

Analysis of Genera

a. 1 Snout longer; preorbital greater than eye; membrane of spinous dorsal entire.

Chironemus.

a. 2 Snout short; preorbital less than eye; membrane of spinous dorsal deeply notched after each spine. Ihdepterus.

Genus Chironemus Cuvier

Chironemus Cuvier, Hist. Nat. Poiss.,
vol. 3, p. 78, April 1829. (Type
Chironemus georgianus Cuvier,
monotypic.)

Body elongately ovoid,
slightly compressed. Head
small. Snout rather long and
pointed. Eye small, high,
invades upper profile, advanced
from middle in length of
head. Mouth short in cleft,
moderate, horizontal, terminal,
jaws equal. Maxillary not
or nearly reaches opposite
front of eye. Small ^{wiggleform} teeth in
both jaws and on vomer, none
on palatines. Preopercle entire.

Pseudobranchiae present.

Branchiostegals 6. No air bladder. Pyloric caeca 2.

Scales rather small, cycloida.
Lateral line present, complete.
One dorsal with 14 or 15 spines.
Anal with 3 spines. Caudal
truncated. Lower 6 and upper-
most pectoral rays simple.

Australia.

Analysis of Species

- a.¹ Pectoral with 6 simple rays;
soft dorsal base rather
shorter than spinous dorsal
base. marmoratus.
- a.² Pectoral with 7 simple rays;
soft dorsal base half long as
spinous dorsal base. georgianus.

Chironemus marmoratus Günther

Chironemus marmoratus Günther,
 Cat. Fish. Brit. Mus., vol. 2, p. 76,
 1860 (type locality, Swan River; —
 Darmley Island). — Gill, Proc.
 Acad. Nat. Sci. Philadelphia, p. 114,
 March 1862 (reference). — Macleay,
 Proc. Linn. Soc. New South Wales,
 5, pt. 4, p. 421, 1881 (Western
 Australia; Darmley Island;
 Port Jackson).

— Ogilby, Edible Fish. New South
 Wales, p. 54, pl. 17, 1893 (New
 South Wales; Lord Howe Island).

— Stead, Edible Fish. New South
 Wales, p. 70, 1908. — Waite, Trans.
 New Zealand Inst., vol. 42, p. 378,
 1909 (1910) (Kermadec Islands),
 p. 381 (Norfolk Island).

— Roughley, Fishes of Australia,
p. 121, pl. 39, 1916.

- McCulloch and Phillips, Rec.
Austral. Mus., vol. 14, no. 1, p. 19,
Feb. 28, 1923 (Bay of Islands,
New Zealand; Port Jackson).
— McCulloch and Whitley, Mem.
Queensland Mus., vol. 8, pt. 2, p. 157,
July 7, 1925 (reference).
— McCulloch, Austral. Mus. Mem.,
no. 5, pt. 2, p. 256, Sep. 10, 1929
(reference); Fishes of New South
Wales, ed. 3, p. 67, pl. 29, fig. 245a,
1934.

Haplodactylus fergusoni Hector,
 Trans. New Zealand Inst., vol. 7,
 p. 243, July 1875 (type locality,
 Kawakawa Bay, New Zealand).

Chironemus fergusoni Hector,
 t.c., vol. 9, p. 467; pl. 8, fig. 8a,
 1877.
 — Waite, Rec. Canterbury Mus.,
 vol. 1, no. 1, p. 21, April 25, 1907
 (reference).

Chironemus aboriginalis Whitley,
 Austral. Zool. Journ., vol. 6, pt. 4,
 p. 321, Feb. 13, 1931 (on Oggly
 and Roughley).

309

Depth $2\frac{7}{8}$; head $3\frac{1}{4}$. Snout
 $2\frac{7}{8}$ in head; eye $5\frac{1}{8}$, 2 in
snout; maxillary not reaching
eye; interorbital ^{with eye} impinging on
upper profile of head.

Scales 55 to 58 in lateral
line; 10 above, 20 below.

D. XV, 18, sixth spine $2\frac{1}{10}$ in
head, first branched ray $2\frac{1}{10}$;
A. III, 6, second spine $2\frac{4}{5}$,
first ray $1\frac{1}{3}$; caudal $1\frac{1}{5}$,
convex behind; least depth of
caudal peduncle $2\frac{3}{4}$; pectoral
 $1\frac{7}{8}$, rays 9, VI, lower simple rays
with only ends free; ventral I, 5,
fin $1\frac{1}{3}$ in head.

Olive green or yellowish-
brown, blotched and marbled
with rich dark reddish-brown.
Young and half grown examples

310

with bright red spots of moderate size. Spinous dorsal dark brown, immaculate. Other fins spotted and speckled with reddish brown. Length 355 mm.

(Ogilby.)

Queensland, New South Wales,
Victoria, Western Australia,
Tasmania, New Zealand, Lord
Howe Island.

Chironemus aboriginalis

311

According to Whitley, ~~it~~ would differ from Chironemus marmoratus Günther in the sixth dorsal spine longest, generally $2\frac{1}{4}$ to $2\frac{1}{2}$ in head and the height of body more than length of head.

Chironemus georgianus Cuvier

Chironemus georgianus Cuvier, Hist.
Nat. Poiss., vol. 3, p. 78, April 1829
(type locality, "fort du roi
George à la Nouvelle-Hollande").
— Günther, Cat. Fish. Brit. Mus.,
vol. 2, p. 76, 1860 (copied). — Gill,
Proc. Acad. Nat. Sci. Philadelphia,
p. 114, March 1862 (reference). —
Macleay, Proc. Linn. Soc. New South
Wales, vol. 5, pt. 3, p. 421, 1881 (copied).

— McCulloch, Austral. Mus. Mem.,
no. 5, pt. 2, p. 255, Sept. 10, 1929
(reference).

D. XV, 16, base of soft dorsal
half long at spinous dorsal
base; A. III, 7; pectoral
with 7 simple rays. (Günther.)
Western Australia.

Genus Threpterus Richardson

Threpterus Richardson, Proc. Zool.
Soc. London, vol. 18, p. 68, 1850.
(Type Threpterus maculosus
Richardson, monotypic.)

Differs from Chironemus Cuvier
in the short snout, the preorbital
less than the eye and the
membrane of the spinous
dorsal deeply notched.

Threpterus maculosus Richardson

Threpterus maculosus Richardson,
 Proc. Zool. Soc. London, vol. 18, p. 70,
 Pl. 2, figs. 1-2, 1850 (type
 locality, King George's Sound).

- Waite, Rec. South Austral. Mus.,
 vol. 2, no. 1, p. 125, fig. 189 (copied).
 April 23, 1921.

- McCulloch, Austral. Mus. Mem.,
 no. 5, pt. 2, p. 256, Sep. 10, 1929 (reference).

Chironemus maculosus Günther,
 Cat. Fish. Brit. Mus., vol. 2, p. 78,
 1860 (copied). — Gill, Proc. Acad.
 Nat. Sci. Philadelphia, p. 114,
 March 1862 (reference). — Macleay,
 Proc. Linn. Soc. New South Wales,
 vol. 5, pt. 3, p. 421, 1881 (copied);
 — Waite, Rec. Austral. Mus., vol. 6,
 pt. 2, p. 63, Sep. 15, 1905 (Houtman's Librolhoz).

Preorbital marrow. Scales $5\frac{1}{2}$ in
 lateral line. D. XIV, 16, base of
 soft dorsal $\frac{2}{3}$ that of spinous;
 A. III, 7; seven simple pectoral
 rays; membrane between
 dorsal spines deeply notched,
 and produced into a small
 free lobe behind each spine.
 Pale brown. Head, body, soft
 dorsal, caudal and anal fins
 spotted with blackish. (Günther.)
 Western Australia.